

# Dirty Electricity isn't renewable fuel

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The Renewable Fuel Standard (RFS) is the most important federal policy you have never heard of. It is also undoubtedly the most broken. For 15 years, it has forced dirty corn ethanol into the nation's fuel supply.

Now, the Biden Administration is contemplating using this broken mandate to subsidize some of our dirtiest electricity sources—woody biomass, factory farm gas, and landfill gas. The plan? Declare that electric vehicles (EVs) charged with these false solutions are actually being powered by renewable fuel.

Special interests, including factory farmers, are lobbying hard to implement this change quickly. But President Biden's new EPA Administrator Michael Regan has the power to ignore them. This would be the right choice for communities, for the climate, and for a future that runs on truly sustainable EVs.

## Renewable Fuel Standard 101

The RFS is a federal mandate that requires the blending of biofuels into U.S. transportation fuel. It was created under the Energy Policy Act of 2005, and expanded under the Energy Independence and Security Act of 2007. The original intent of the RFS was to drive the production of alternatives to gasoline that would decrease the nation's dependence on foreign oil and lower U.S. greenhouse gas emissions. But things have not gone according to plan.

The RFS contains four biofuel categories: conventional, advanced, biomass-based diesel and cellulosic. The categories are differentiated based on specific feedstock and lifecycle greenhouse gas emissions requirements. The best way to understand the RFS is as a series of nested mandates. It consists of a single mandate for renewable fuel, with separate, smaller mandates embedded within it. Nested within the renewable fuel mandate is a mandate for advanced biofuels. Nested within the advanced mandate are separate quotas for cellulosic fuel and biomass-based diesel.

The EPA is responsible for administering the RFS and in particular for setting the annual volume of biofuels that oil refiners are required to blend into our overall fuel supply. In practice, this has put the EPA at the forefront of the two biggest failures of the RFS: its inability to reduce transportation emissions and its inability to spur the development of biofuels beyond corn ethanol.

## The Conventional Bucket — Dirty Corn

The story of the RFS is overwhelmingly a story about corn. It makes up virtually the entire conventional mandate and represents the majority of all biofuels across the entire standard. The problem is that its ability to decrease transportation emissions is questionable at best. It may [in fact be dirtier](#) than regular gasoline and it was certainly never intended to remain the primary feedstock of the RFS.

In theory, conventional corn is supposed to offer at least a 20 percent reduction in GHG emissions relative to gasoline. This reduction is meant to factor in the emissions from growing corn, refining it, transporting it, and eventually burning it as fuel, as well as the “indirect effects” of increasing demand leading to increasing cultivation and increasing emissions. But the potential climate benefits of corn are eroded by the exemption granted to so-called ‘grandfathered corn’. This refers to ethanol from refineries in operation or under construction before or by 2007 that are not required to demonstrate any emissions reductions relative to gasoline. As of 2017, 87% of plants producing ethanol for the RFS operated under this exception. The [Government Accountability Office](#) concluded in 2019 that this was a major reason the climate benefits of the RFS were either very small or non-existent.

In addition to the RFS's failure to demonstrate climate benefits, it has been directly responsible for environmental harms. In a long over-due analysis of the program, the EPA acknowledged that the RFS has been a driver of habitat destruction, as well as air and water pollution. The Triennial report found that,

“[f]acilities producing ethanol from corn and cellulosic feedstocks tend to have greater air pollutant emissions relative to petroleum refineries on a per-BTU of fuel produced basis.”

In addition to the weak emissions impact, the RFS has driven land use changes, resulting in the loss of biodiversity and troubling trends in water and fertilizer use. Water stressed Western states have experienced increased water demand, driven by the RFS incentivizing increased corn production. Additionally, [modeling studies](#) suggest that biofuel demand has contributed to harmful algal blooms in Lake Erie and to hypoxia in the northern Gulf of Mexico. The RFS was designed to regulate carbon emissions. It includes no real guardrails to protect against these types of pollutants and habitat destruction.

## Cellulosic Fuel or Dirty Electricity?

Perhaps the biggest failure of the RFS is its failure to spur the development of cellulosic fuels. Cellulosic fuels are liquid fuels made from inedible plant waste like crop trimmings, that were meant to be at least 60 percent cleaner than gasoline. When the law was revised in 2007, Congress expected there to be 16 billion gallons of cellulosic biofuels in the nation's fuel supply by [2022](#). Today, there are nearly none.

The EPA has had to lower the required volume of cellulosic fuel for years and make available “[waiver credits](#)” for oil refiners to purchase. The simple non-existence of these fuels has led to the current dilemma, with special interests clamoring for the cellulosic standard to be used not for liquid fuel but for dirty electricity. This would mean biomass-based electricity like wood could generate cellulosic credits when used to charge EVs. These credits could then be sold to oil refiners to satisfy their requirements under the RFS.

Back in 2014, [the EPA decided](#) that compressed natural gas captured from landfills and factory farms qualified as a cellulosic fuel. This was arguably a minor development since so few vehicles run on compressed natural gas. Nevertheless, the analysis was sloppy and only measured the climate benefits of capturing gas from

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In the same decision, the [EPA also said](#) that electricity from those same sources could qualify for cellulosic credits if it went to charge EVs. But no electric credits—or e-RINS, as they are called—were ever issued. This was due in part to the disinterest of the Trump Administration, but also to the genuine administrative difficulty of following electric power from where it is generated to where EVs are charged. Should the power companies themselves earn e-RINS? Or perhaps the EV manufacturers? Or maybe some combination of public charging stations and individual drivers? Billions of dollars are riding on the question and special interests have begun lobbying in earnest (see below).

The problem is that for communities and the climate, the question of which corporate interest ultimately cashes in on e-RINS is moot. It is impossible for the RFS to support truly sustainable electricity like wind and solar. It can only be used as a backdoor to subsidize dirty electricity masquerading as renewables. Whether it is already approved pathways like factory farm and landfill gas or potentially eligible fuels like wood, the EPA has no reason to take the RFS electric:

- **Wood Biomass:** At the smokestack, wood biomass is one of the dirtiest sources of energy, producing more carbon and toxic pollutants than even coal. Many biomass plants burn whole trees, tires, and treated lumber such as creosote railroad ties, resulting in [ozone and PM2.5 precursors](#), including nitrogen oxides, volatile organic compounds, heavy metals, and particulate matter. The supply chain for wood biomass results in additional particulate matter, nitrogen oxides, carbon monoxide, and volatile organic compounds. Sourcing wood for incineration and wood pellet production has led to clear-cutting hardwood forests, driving a loss of biodiversity and leaving surrounding communities at increased risk of flooding.
- **Factory farm gas:** The liquefied manure management system commonly used by factory farm operations monetizes football field-sized lagoons of manure, which contain high concentrations of nitrogen, phosphorus, pathogens, and heavy metals. These operations expose surrounding communities to harmful concentrations of ammonia, hydrogen sulfide, and volatile organic compounds. This toxic air pollution results in increased cases and severity of respiratory illnesses, as well as nausea, headaches, and other health conditions. The ammonia and hydrogen sulfide emissions from industrial animal facilities have been linked with [higher rates of infant mortality and decreased life expectancy](#). Expansion of factory farm gas will require building out a network of pipelines. Much of the proposed expansion in the southeast of the US would [cross fragile ecosystems](#), such as wetlands in North Carolina, that provide important flooding protection and clean water to nearby communities.
- **Landfill Gas:** Monetizing the collection of landfill gas creates the [perverse incentive](#) to increase the amount of methane that these landfills would otherwise release, collecting this gas requires abandoning best practices that would normally minimize air pollution. In fact, the IPCC found that as much as [80 percent](#) of the methane generated at landfills escapes into the atmosphere. This methane pollution is compounded by the EPA's unwillingness to enforce hazardous air pollutants emissions controls on landfills through the Clean Air Act. Communities in the airshed of over 1,000 municipal solid waste landfills [breathe dangerous and unlawful volumes](#) of ethyl benzene, toluene, and benzene. Leachate from landfills can carry nitrate, phosphate, ammonium, and oxides into surrounding groundwater. Odor, dust, noise, windblown litter, vermin, and insects plague nearby communities and keep their [property values](#) low. Increasing demand for landfill gas through the RFS will further embed these harms.

### Who Benefits? Dirty Energy Interests

Recent lobby filings show a concerted push from dirty energy and EV interests to open the RFS for electricity. These are some of the highlights from the first three months of 2021:

- **Factory Farmers:** The American Biogas Council represents companies that capture methane from garbage dumps and factory farms. [Filings show](#) that the trade association has been lobbying both the EPA and Congress around, "...issues related to the RFS and biogas' role in the cellulosic category including the electric pathway." Similarly, the National Milk Producers Federation has [declared in its filings](#) that it had "Supported [the] RFS Electricity Pathway to make biogas eligible as a renewable fuel" in lobbying Congress, the EPA, and the US Department of Agriculture. Large, industrial dairy operations with methane digesters are one of the likeliest beneficiaries of an electric RFS.
- **Tree killers:** The trade association representing burning woody biomass for electricity has been equally active. In January, [filings show that](#) the Biomass Power Association engaged the lobbying firm MGV LLC to advocate around, "Issues related to biomass and other biofuels; issues related to the RFS including the electric pathway; Issues related to recycling organic waste and renewable biofuels." The Biomass Power Association also reported lobbying directly on the ["Renewable Fuel Standard."](#) In theory, the registered lobbyist is a separate firm called C. Annand LLC, but this would seem to be an [entity run by](#) the Biomass Power Association's current [Executive Director](#), Carrie Annand, a former staffer for the House Energy and Commerce Committee.
- **Charging Stations:** Lobby disclosures from [Electrify America](#), a subsidiary of Volkswagen, show a [pattern of interest](#) in the RFS electrification pathway since at least 2019. The company was originally created by Volkswagen in the wake of its diesel emissions scandal, when 11 million Volkswagen cars were fitted with cheat devices that allowed them to cheat emissions tests while producing up to [40 times the legal amount of pollution](#). In its settlement, Volkswagen agreed to spend [\\$2 billion nationwide](#) on clean car infrastructure and created Electrify America to spearhead this investment. Now, this subsidiary has been lobbying for years on the RFS electrification pathway, admitting in lobby filings that it sought to use [must-pass spending legislation](#) to force the EPA into approving an electric RFS. Another company, [ChargePoint Holdings](#), which owns one of the largest EV charging networks, has also been lobbying Congress on the RFS. It is reasonable to assume that an EV charging network's interest in the RFS would be the electrification pathway.

### Where will Administrator Regan fall on Environmental Justice?

The Renewable Fuel Standard has consistently failed to achieve its stated goal of reducing transportation emissions. However, expanding it to give credits to electricity from dirty energy would be the most egregious failure of all. The facilities that produce, collect, and burn these dirty fuels are disproportionately sited in BIPOC communities. Increasing the air, water, and soil pollution around frontline communities, in the name of transitioning away from fossil fuels, is wildly inconsistent with the tenants of Environmental Justice.

Michael Regan began his tenure at the EPA publicly committing to Environmental Justice and promising to redress the legacy of environmental harm to low-income and Black, Indigenous, Latino, and other communities of color. Utilizing the cellulosic mandate of the Renewable Fuel Standard as a backdoor giveaway for dirty energy is inconsistent with this commitment.